



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,590	12/23/2003	Robert L. Wheeler	1027.02	1589

21901 7590 11/09/2004

SMITH & HOPEN PA  
15950 BAY VISTA DRIVE  
SUITE 220  
CLEARWATER, FL 33760

EXAMINER

WRIGHT, ANDREW D

ART UNIT	PAPER NUMBER
----------	--------------

3617

DATE MAILED: 11/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/707,590

Applicant(s)

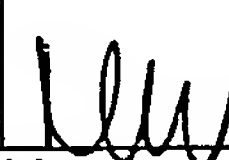
WHEELER ET AL.

Examiner

Andrew Wright

Art Unit

3617



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,6-9 and 11 is/are rejected.
- 7) ☒ Claim(s) 3-5 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/22/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Species A corresponding to figures 1-14 in the reply filed on 9/8/04 is acknowledged. Claims 1-10 and generic claim 11 reads on species A.

2. Claims 12-16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 9/8/04.

### ***Specification***

3. The disclosure is objected to because of the following informalities: reference character "38" is used in the specification (paragraph 0090) but is not used in the drawings. Appropriate correction is required.

### ***Claim Objections***

4. Claims 2 and 3 are objected to. The recitation "said dinghy" and "the dinghy" should be "said water craft". Consistent terminology should be used. Appropriate correction is required.

5. Claim 8 is objected to. The recitation "said transom" should be "said stern". Consistent terminology should be used. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 3617

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Garmont (US 2,488,183). Garmont shows a watercraft with a hull with a bow, stern, sidewalls, and deck. The hull has a cavity formed in the bottom surface of the hull. The cavity is longer than it is wide. The cavity has a forward end near the bow. The cavity has a rearward end that is forward of the stern (see figs 6-9). Air flows into the cavity at the forward end and out of the cavity at the rearward end. The airflow reduces water resistance.

8. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Ford (US 5,146,863). Ford shows a watercraft with a hull with a bow, stern, sidewalls, and deck. The hull has a concavity (38) that is longer than it is wide. The concavity has forward end (40) near the bow and rearward end (50) forward of the stern. Air flows into the forward end and out of the rearward end. The air flow reduces skin friction.

9. Regarding claim 2, air supply device has a scoop (not numbered). The scoop directs air into the concavity regardless of the direction of travel. Passageway (60) extends from the scoop to a leading end of the concavity. Water flowing under the watercraft is capable of creating a suction that will draw air into the passageway and concavity.

10. Claims 1 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Cox et al. (US 3,342,032). Cox shows a watercraft with a hull with a bow, stern, sidewalls, and deck. The hull has a cavity formed in its underside. The concavity is longer than it

Art Unit: 3617

is wide. The concavity has a forward end just aft of portion (27) near the bow. The cavity has a rearward end defined by flaps (33) and hinge (31), said rearward end being forward of the stern. Scoop (21) directs air, at least comprised in spray, into the cavity. Air that enters the cavity at the forward end can exit through the rearward end. Air flowing through the cavity will reduce surface friction. Regarding claim 8, Cox shows a rigid stern plate (33). The stern plate is attached to the underside of the hull forward of the stern, and has a front edge higher than a trailing edge.

11. Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Cox et al. (US 3,342,032). Cox shows a watercraft comprising a hull with a concavity formed therein. The concavity is longer than it is wide. Side rails (24') are secured to opposite sides of the hull, and cooperate with the concavity to capture air in the concavity to reduce hydrodynamic drag on the hull when the boat is moving.

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garmont (US 2,488,183) in view of Arbaugh et al. (US 6,453,837) and Cox et al. (US 3,342,032). Garmont discloses the elements of claim 1. Garmont does not disclose the layer of rigid material and the elongate ribs. Garmont does not disclose the specifics of the hull manufacture. It is well known and common to construct a hull using gel coat

Art Unit: 3617

covered fiberglass. Arbaugh teaches that most recreational boats have hulls of fiberglass construction with a gel coat finish. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Garmont by making the hull of fiberglass with a gel coat finish. The motivation would be to provide a lightweight and visually appealing hull. The gel coat is a layer of rigid material.

14. Further regarding claim 6, Garmont does not teach the ribs. Cox teaches the use of elongate, longitudinally disposed ribs (24') secured to the underside of the sidewalls of a boat. Cox teaches that the skeg prevent skidding when the boat is turned. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Garmont by adding ribs under the sidewalls. The motivation would be to prevent skidding when the boat is turned.

15. Claims 1, 2, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ford (US 5,146,863). Ford discloses the elements of claims 1 and 2. Ford does not show that the scoop is elliptical. It is within the range of knowledge of the skilled artisan to make the air scoop any desired shape. Elliptical scoops are known on blowers and automobiles. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ford by making the air scoop elliptical. The motivation would be to optimize design parameters such as size, weight, and component layout by optimizing the shape of the air scoop.

Art Unit: 3617

16. Claims 1, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox et al. (US 3,342,032) in view of Osmundsvaag (US 6,672,234). Cox discloses the elements of claims 1 and 8. Cox does not disclose that the angle is about one to two degrees. The plate (30) can be set at different angles. Osmundsvaag shows an air cushion watercraft similar to Cox with a pivotable plate aft of the air cavity. Osmundsvaag teaches that the plate can be positioned between 0° and 25°. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Cox by making the plate 1° as taught by Osmundsvaag. The motivation would be optimize the hydrodynamic performance of the water craft.

#### ***Allowable Subject Matter***

17. Claims 3-5 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. JP 52-11594 shows a hull with a cavity and air scoop. JP 62-120292 shows a hull with an air scoop.



Art Unit: 3617

19. Any inquiry concerning this communication should be directed to examiner Andrew D. Wright at telephone number (703) 308-6841. The examiner can normally be reached Monday-Friday from 9:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, S. Joe Morano, can be reached at (703) 308-0230. The fax number for official communications is 703-872-9306. The fax number directly to the examiner for unofficial communications is 703-746-3548.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andrew D. Wright  
Patent Examiner  
Art Unit 3617

*Ar 11/3/54*  
**ANDREW D. WRIGHT**  
PRIMARY EXAMINER